

### **REMARKS**

Entry of the foregoing, reexamination and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

As correctly noted in the Office Action Summary, claims 18-35 were pending. By the present response, claims 18 and 26 have been amended, and claims 23-24 have been canceled. Thus, upon entry of the present response, claims 18-22 and 25-35 remain pending and await further consideration on the merits.

Support for the foregoing amendments can be found, for example, in at least the following locations in the original disclosure: page 1, lines 21-24; page 2, lines 14-19; page 3, lines 23-25; page 4, lines 18-21; page 12, lines 2-4; and the original claims.

### ***THE FINALITY OF THE OFFICIAL ACTION IS IMPROPER***

Applicants note that the Official Action of June 9, 2009 has been improperly designated as a "Final" rejection. Applicants confirm that this incorrect designation is also present in the USPTO PAIR system. The June 9, 2009 Official Action is the first Official Action on the merits in this application. Moreover, none of the exceptions for making a first action final rejection set forth in MPEP §706.07(b) are satisfied. Therefore, the rejection has been clearly improperly designated as a final rejection. Clarification and withdrawal of the finality of the June 9, 2009 Official Action is respectfully requested.

**CLAIM REJECTIONS UNDER 35 U.S.C. §112**

Claims 18-35 stand rejected under 35 U.S.C. §112, second paragraph, on the grounds set forth in paragraph 2 of the Official Action.

By the present response, applicants have amended claim 18 in a manner which addresses the above-noted rejection. Therefore, reconsideration and withdrawal of the rejection is respectfully requested.

**CLAIM REJECTIONS UNDER 35 U.S.C. §103**

Claims 18-35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. to 6,174,943 to Matsumoto et al. (hereafter "*Matsumoto et al.*"), U.S. Patent No. 6,255,371 to Schlosser et al. (hereafter "*Schlosser et al.*"), U.S. Patent No. 6,365,071 to Jenewein et al. (hereafter "*Jenewein et al.*"), U.S. Patent No. 6,420,459 to Hörold (hereafter "*Hörold '459*"), U.S. Patent No. 6,538,054 to Klatt et al. (hereafter "*Klatt et al.*"), U.S. Patent No. 6,547,992 to Schlosser et al. (hereafter "*Schlosser et al.*"), U.S. Patent No. 6,689,825 to Bajgur et al. (hereafter "*Bajgur et al.*"), U.S. Patent No. 7,087,666 to Hoerold et al. (hereafter "*Hoerold et al.*"), U.S. Patent No. 7,148,276 to Bauer et al. (hereafter "*Bauer et al.*"), U.S. Patent Application Publication No. 2003/0083409 to Bienmuller et al. (hereafter "*Bienmuller et al. '409*"), U.S. Patent Application Publication No. 2003/0149145 to Bienmuller et al. (hereafter "*Bienmuller et al. '145*"), U.S. Patent Application Publication No. 2004/0110878 to Knop et al. (hereafter "*Knop et al. '878*"), U.S. Patent Application Publication No. 2005/0049339 to Knop et al. (hereafter "*Knop et al. '339*"), U.S. Patent Application Publication No. 2005/0101708 to Knop et al. (hereafter "*Knop et al. '708*"), U.S. Patent Application Publication No. 2005/0137297 to De Wit (hereafter

"De Wit"), U.S. Patent Application Publication No. 2008/0139711 to Borade et al. (hereafter "*Borade et al.*") or U.S. Patent Application Publication No. 2009/0036578 to Elango et al. (hereafter "*Elango et al.*"), in view of U.S. Patent No. 4,233,199 to Abolins et al. (hereafter "*Abolins et al.*") or U.S. Patent No. 6,025,421 to Atarashi et al. (hereafter "*Atarashi et al.*") on the grounds set forth in paragraph 6 of the Official Action. For at least the reasons noted below, this rejection should be withdrawn.

The present invention is directed to an improved flame-retardant system. The flame-retardant system of the present invention is formulated in a manner which provides certain benefits and advantages relative to conventional flame-retardant systems. For example, a flame-retardant system formulated according to the principles of the present invention resists discoloration and degradation upon exposure to temperatures on the order of 200°C. A flame-retardant system formulated according to the principles of the present invention is set forth in amended claim 18.

*18. A flame-retardant system for polymers, the system being resistant to discoloration and degradation upon exposure to temperatures of about 200°C or greater, the system comprising:*

*a phosphorus-based compound, the phosphorus-based compound comprising esters or salts of phosphoric, phosphinic and phosphonic acids;*

*the phosphorus-based compound impregnated on a porous solid support, the support comprising silica, alumina, silica/alumina, sodium silicoaluminate, calcium silicate, magnesium silicate, zirconia, magnesium oxide, calcium oxide, cerium oxide or titanium oxide;*

*the system further comprising at least one stabilizing compound which is a scavenger of acid functional groups and melamine condensation products and/or derivatives, the system comprising 30% to 80% by weight of the stabilizing compound relative to the amount of phosphorus-comprising compound.*

A flame-retardant polymer based composition formulated according to the principles of the present invention, according to a further aspect of the present invention, is set forth in amended claim 26. Amended claim 26 recites:

*26. A flame-retarded polymer-based composition, comprising a flame-retardant system comprising a phosphorus-based compound which is an ester or salt of phosphonic, phosphinic and phosphoric acids and at least one stabilizing compound which is a scavenger of acid functional group and melamine condensation derivatives, with 30% to 80% by weight of the stabilizing compound relative to the amount of phosphorus-comprising compound.*

As evident from the above, amended claims 18 and 26 each require, *inter alia*, 30% to 80% by weight of the stabilizing compound relative to the amount of phosphorus-comprising compound. A careful review of the grounds for rejection reveals that nowhere is it even alleged anywhere in the 32 grounds for rejection set forth in the Official Action that this limitation is even satisfied by any combination or permutation of teachings of the 18 applied prior art references. Moreover, it is noted that "concentrations" are referenced in a conclusory manner in paragraph 7 of the Official Action. However, a review of the applied prior art references reveals that in each instance the referenced "concentrations" refer to amounts relative to the total weight of the treated polymeric material, and not to an amount of stabilizing compound relative to the amount of phosphorus-comprising compound. Thus, the applied prior art fails to disclose or even suggest the system or composition of amended claims 18 or 26.

Amended claim 18 additionally requires, *inter alia*, that the system be resistant to discoloration and degradation upon exposure of temperatures of about 200°C or greater. Again, nowhere do the grounds for rejection even allege that this aspect of

amended claim 18 is satisfied. Thus, amended claim 18 is also distinguishable over the applied prior art for at least this additional reason.

The remaining claims rejected on the above-noted grounds depend from either claim 18 or 26. Thus, these claims are also distinguishable over the applied prior art for at least the same reasons noted above. Reconsideration and withdrawal of the rejection is respectfully requested.

**CONCLUSION**

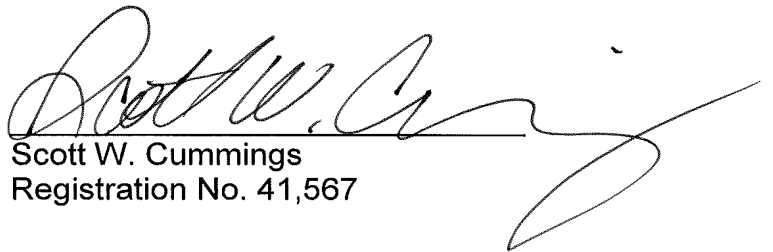
From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By:

  
Scott W. Cummings  
Registration No. 41,567

**Customer No. 21839**  
703 836 6620